

CLAIMS

What is claimed is:

1 1. A method of reducing time for reconnecting a first device to a second device via a
2 communication link, said method comprising the steps of:
3 establishing a communication session between said first device and said second device over
4 a communication channel;
5 obtaining an operating parameter for said data transmission system, said operating parameter
6 being associated with said communication channel;
7 storing said operating parameter at said second device as a stored operating parameter; and
8 recalling said stored operating parameter, in response to the termination of a temporary pause
9 in said communication session, to thereby obtain a recalled operating parameter.

2. A method according to claim 1, wherein said obtaining step comprises the step of
initializing at least one of said first and second devices.

3. A method according to claim 1, further comprising the steps of:
resetting said second device utilizing said recalled operating parameter; and
subsequently re-establishing a data transmission mode between said first and second devices.

1 4. A method according to claim 1, further comprising the steps of:
2 receiving a reconnect indication at said first device, said reconnect indication being generated
3 in response to a request to terminate said temporary pause in said communication session;
4 transmitting a signal point sequence from said first device to said second device in response
5 to said reconnect indication;
6 acquiring a received sequence at said second device, said received sequence being related to
7 said signal point sequence; and
8 determining characteristics of said data communication network in response to said received
9 sequence.

5. A method according to claim 4, wherein said determining step determines characteristics of digital impairments associated with said data communication network.

6. A method according to claim 4, wherein said signal point sequence comprises a sequence of pulse code modulation signal points.

7. A method according to claim 1, wherein:
said obtaining step further obtains a second operating parameter for said data transmission system, said second operating parameter being associated with said communication channel;
said storing step further stores said second operating parameter at said first device as a second stored operating parameter; and
said recalling step further recalls said second stored operating parameter, in response to the termination of a temporary pause in said communication session, to thereby obtain a second recalled operating parameter.

8. A method according to claim 1, wherein said stored operating parameter comprises initialization data associated with a receiver resident at said second device.

1 9. A method of reducing time for reconnecting a first device to a second device via a
2 communication link, each of said first and second devices being configured to maintain a number
3 of stored operating parameters associated with a data transmission mode, said method comprising
4 the steps of:

5 receiving a reconnect indication at said first device;
6 transmitting a reply signal from said first device to said second device in response to said
7 reconnect indication;

8 recalling a stored operating parameter at said second device in response to said reply signal
9 to thereby obtain a recalled operating parameter for said second device; and

10 subsequently re-establishing said data transmission mode between said first and second

11 devices using said recalled operating parameter for said second device.
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10. A method according to claim 9, further comprising the step of resetting said second device utilizing said recalled operating parameter for said second device.

1 11. A method according to claim 9, wherein:
2 said recalling step further recalls a stored operating parameter at said first device in response
3 to said reconnect indication to thereby obtain a recalled operating parameter for said first device; and
4 said re-establishing step further re-establishes said data transmission mode between said first
5 and second devices using said recalled operating parameter for said first device.

12. A method according to claim 9, wherein said reply signal comprises a signal point sequence configured to enable said second device to determine characteristics of digital impairments associated with said data communication network.

13. A method according to claim 12, wherein said signal point sequence comprises a sequence of pulse code modulation signal points.

14. A method according to claim 9, wherein said reply signal comprises a transition sequence configured to enable said second device to determine robbed bit signaling characteristics of said data communication network.

15. A method according to claim 14, wherein said transition sequence comprises positive and negative values of at least one signal point.

16. A method according to claim 9, wherein said stored operating parameter comprises data associated with impairments of said communication link.

17. A method according to claim 9, wherein said stored operating parameter comprises data associated with a signal point constellation for said second device.

18. A method according to claim 9, wherein said stored operating parameter comprises data associated with echo canceler settings for said second device.

19. A method according to claim 9, wherein said stored operating parameter comprises data associated with power level settings for said second device.

20. A data transmission system comprising a first device and a second device configured to communicate with each other over a communication channel via a data communication network, said first device comprising:

a memory element configured to maintain a first number of stored operating parameters associated with a data transmission mode of said data transmission system;

a receiver section configured to receive communication signals transmitted by said second device and to receive a reply signal in response to a request to terminate a temporary pause in said data transmission mode; and

a processor element configured to recall at least one of said first number of stored operating parameters at said first device in response to said reply signal to thereby obtain at least one recalled operating parameter for said first device, and to reset said first device utilizing said at least one recalled operating parameter for said first device.

21. A data transmission system according to claim 20, wherein said second device comprises:

a second memory element configured to maintain a second number of stored operating parameters associated with said data transmission mode;

a second receiver section configured to receive communication signals transmitted by said first device and to receive a reconnect indication, said reconnect indication being generated in response to said request; and

a second processor element configured to recall at least one of said second number of stored operating parameters at said second device in response to said reconnect indication to thereby obtain

10 at least one recalled operating parameter for said second device, and to reset said second device
11 utilizing said at least one recalled operating parameter for said second device.

22. A data transmission system according to claim 21, wherein said second device further comprises a second transmitter section configured to transmit communication signals to said first device and to transmit said reply signal.

23. A data transmission system according to claim 20, wherein said reply signal comprises a transition sequence configured to enable said second device to determine robbed bit signaling characteristics of said data communication network.

24. A data transmission system according to claim 20, wherein said reply signal comprises a signal point sequence configured to enable said first device to determine characteristics of digital impairments associated with said data communication network.

25. A data transmission system according to claim 20, wherein at least one of said first and second devices is compatible with ITU-T Recommendation V.90.

26. A data transmission device comprising:
a memory element configured to maintain a stored operating parameter associated with a data transmission mode of said data transmission device;
a receiver section configured to receive communication signals transmitted by a remote device and to receive a reply signal in response to a reconnect request; and
a processor element configured to recall said stored operating parameter in response to said reply signal to thereby obtain a recalled operating parameter, and to reset said data transmission device utilizing said recalled operating parameter.

27. A data transmission device according to claim 26, wherein said reply signal is associated with a request to terminate a temporary pause in said data transmission mode.

28. A data transmission device according to claim 26, wherein said recalled operating parameter is used to re-establish said data transmission mode.

29. A data transmission device according to claim 26, wherein said stored operating parameter comprises initialization data associated with a receiver resident at said data transmission device.

30. A data transmission devcie according to claim 26, wherein said data tranmission device is further configured such that it is compatible with ITU-T Recommendation V.90.